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report EV. 113 no. 561-550.

IN RE INVESTIGATION OF AN ACCIDENT WHICH CHRED ON THE NORFOLK & WESTERN RAILWAY NEAR DUBLIN, VA., ON JANUARY 30, 1918. JUL 09 1976

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On January 30, 1918, there was a head-end collision between a passenger train and a freight train on the Norfolk & Western Railway near Dublin, Va., which resulted in the death of 4 employees, serious injury of 3 employees, and slight injury of 4 passengers and 1 express messenger. After investigation the Chief of the Bureau of Safety submits the following report:

The Radford Division of the Norfolk & Western Railway, on which this accident occurred is a double-track line from Roanoke, Va., to Radford, Va., and a single-track line from Radford to Bristol, Va., the accident occurring on single-track. Trains are operated by time table, train orders and a manual block system.

Eastbound passenger train No. 26, Thown as "The Memphis Special," en route from Memphis, Tenni, to Washington, D. C., consisted of locomotives 102 and 105, 1 express car of wooden construction, 1 steel mail car, 1 steel combination car, 1 steel coach, 1 steel dining car, 3 steel Pullman sleeping cars, and 1 steel underframe Pullman sleeping car, in the order named, and was in charge of Conductor Charlton and Enginemen Smith and Mason. This train was received from the Southern Railway at Bristol and left there at 7:02 p. m., 5 hours and 27 minutes late, passed Dublin, the last open telegraph office before point of collision, at 10:13 p. m., 5 hours and 55 minutes late, and collided with extra 1461 about 2 miles east of Dublin at 10:17 p. m., while running at a speed of 25 or 30 miles an hour.

Westbound freight train, extra 1461, consisted of locomotive 1461, 22 loaded cars, 4 empty cars and a caboose, en route from Roanoke to Bristol, and was in charge of Conductor Hines and Engineman Jacobson. This train left East Radford at 9:40 p. m., and collided with train No. 26 while running at a speed of about 12 or 15 miles an hour.

The engineman on the leading engine of train No. 26, and the engineman, fireman and head brakeman of extra 1461 were killed. Locomotive 102, the leading locomotive on train No. 26, and locomotive 1461 were badly damaged by the impact, locked together and rolled down the embankment on the north side of the track. Locomotive 105 was derailed and badly damaged but remained in an upright position on the roadbed. The express car was pushed off its trucks to the north side and clear of

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was jammed against the tank frame of the second engine of train No. 26 but remained upright on the roadbed, the east truck of this car being pushed out of place by the truck of the tank and the east end of the car rested on the tank truck; the west truck of this car was derailed. The first four cars of extra 1461, which were loaded with coal, turned down the embankment on the north side of the track and were seriously damaged, while three other cars in this train were damaged but not derailed.

Approaching the point of accident from the west there is a tangent about 4,000 feet long, followed by a 5° curve to the left 710 feet long, the collision occurring about 150 feet in on this curve. Approaching it from the east there is a 4° curve to the left 495 feet long, then a tangent 553 feet long, then a 3° curve to the left 911 feet long, then a tangent 289 feet long, then a 5° curve to the right 710 feet long, the accident occurring about 560 feet in on this curve. The grade descends eastwardly about 1.2% and at point of accident the track is laid on a 7-foot fill.

The track in this vicinity follows a small stream which has its course down a hollow through practically open country on both sides. Located just outside the right-of-way on north side of track near point of collision, is a row of trees, about seven or eight in number, the nearest tree being 39 feet from the track. The possible view the engine crew of extra 1461 had of the approach of train No. 26, looking across the curve and behind this row of trees, was about forty car lengths, and the approximate view on the inside of the trees was about 350 feet. Train No. 26 had passed over the long tangent and around the curve to the left about 150 feet when the collision occurred. The view of the engineman on the leading engine of train No. 26 was very limited, on account of he being on the outside of the curve. It was cloudy at the time of the accident.

Conductor Hines of extra 1461 stated that his train left Roanoke at 3 p. m., arrived at Radford at 8:50 p. m., and after doing the necessary switching he asked for orders at 9:30 p. m., examined the train register, received several orders and a clearance card, called the order numbers back to the operator who placed them on the clearance card. He then showed the orders to the engineman, got on the engine and rode it to the wesswitch, the brakeman opened the switch and when the train started a knuckle broke on the second car from the caboose and the train came to a stop. The knuckle was replaced and the train proceeded within 5 or 6 minutes. He heard the whistle sounded for Melborn and was sitting on the bunk in the caboose and writing when the collision occurred at about 10:15 p. m. He directed the flagman to protect the rear of the train and went to the

front end of the train, reaching there about 10 minutes after the collision occurred. He said that when he examined the train register at East Radford after receiving his orders he overlooked train No. 26 and the operator did not mention it to him. Conductor Hines admitted that when he checked the train register at Radford he did not check it with the time card but checked it from memory.

Rear Brakeman Brown of extra 1461 stated that when his train passed through Christiansburg, about 11 miles east of East Radford, he inquired of Conductor Hines about trains Nos. 2 and 26 and the conductor informed him that one of those trains had passed but he was not certain which one. When his train reached East Radford he assisted in shifting the cars and when the train was ready to go Conductor Hines walked up to the engine and told the enginemen that they had 40 minutes on first No. 42, 5 hours and some minutes on second No. 42, that they were to meet second No. 88 at Wurno, and that everything was in up to this. The train left East Radford, pulled out on the single track and in starting the train after closing the switch a knuckle was broken. In a short time the train started and when it had reached New River he went into the caboose, Conductor Hines gave him the train orders, and he read them and returned them to the conductor about the time the train reached Melrose. In about two or three minutes after this the collision occurred, the speed of his train being about 15 miles an hour at the time.

Conductor Charlton of train No. 26 stated that he left Bristol with orders to run 5 hours and 15 minutes late to Roanoke. His train received a clear block at Dublin, passing there about 10:13 p. m., and collided with extra 1461 at a point about two miles east of there at 10:17 p. m., while running at a speed of about 25 or 30 miles an hour. He felt the air brakes being applied in emergency, followed by the first impact of the collision, and first thought the engine had become derailed. He said it was cloudy, accompanied by a light fog, and some sleet, at the time of the accident, and on account of the collision occurring on a curve he did not think the enginemen of his train saw extra 1461 until a few seconds before it collided with his train.

Fireman Ferrell on locomotive 102, the leading locomotive of train No. 26, stated that after passing Dublin the train was drifting down grade, the steam having been shut off on both locomotives, and the train continued to drift until the collision occurred. Just before reaching the curve the air brakes were applied to steady the train and were applied in emergency just before the collision occurred. He saw the headlight and classification lights of extra 1461, that train being three or four car lengths away at the time, and he immediately

jumped from the locomotive without saying anything to the engineman. He said the air brakes were working good, but that the electric headlight was not burning very clearly. He was on the inside of the curve and had he been looking straight ahead he said he would probably have observed extra 1461 when it was about ten car lengths away.

about ten car lengths away. Operator Dixon at East Radford stated that he went on duty at 4 p. m., issued a clearance card to extra 1461 at 9:30 p. m., and gave it to Conductor Hines, together with train orders Nos. 6, 108, 126, and 128, which were the orders specified on the clearance card, and were all the orders he had for that train. None of these orders contained any information relative to train No. 26. He told Conductor Hines that train No. 91 was still in the block and to make the Clearance Card read "Yellow" (Caution), the conductor took the orders, walked toward the locomotive, and the train departed from East Radford shortly thereafter. Operator Dixon claims that he thought extra 1461 was going to the end of the double track, which extends about a mile and a half west of East Radford, and wait there for train No. 26, but offered no reason for such belief other than his assumption that the crew of extra 1461 knew that train No. 26 had not arrived. He said he did not ask the operator at Dublin for the block for extra 1461, as he was convinced that the crew of that train was going to remain at the end of the double track until train No. 26 arrived, and it was his intention to ask for the block after train No. 26 was reported by Dublin. He admitted, however, that extra 1461 was beyond his reach and could not have been held by him at the end of the double track if the operator at Dublin failed to give him a clear block upon request, but stated it was the general practice for westbound trains that went to the end of the double track to have an understanding between the conductor and operator that the conductor would ask for the block after the arrival of the opposing train, using the emergency telephone for that purpose that is located at the end of the double track. No such arrangements were made with the conductor of extra 1461 on this occasion. Dixon stated that he held train order No. 102, addressed to all concerned, running train No. 26 5 hours and 15 minutes late from Bristol to Roanoke, this order being issued by Dispatcher At 9:22 p. m., just before Conductor Hines reported for orders. Dispatcher Overstreet issued train order No. 73, addressed to trains 30, 26 and all concerned, annulling train or ders 98 and 102, directing train No. 30 to run 10 minutes late, East Radford to Roanoke, train No. 26 to run 5 hours and 40 minutes late, Walton to Roanoke. Upon receipt of this order he removed order 102 from the hook where he had placed it for delivery, and as order 73 was effective as to train No. 26 from Walton, which was east of East Radford, he did not deliver a copy of it to the crew of extra 1461, since it was of no value or concern to that train.

Dispatcher Seay, in charge of the territory from East Radford to Bristol, stated he placed train order No. 98, reading as follows:

"Order 88 is annulled. No. 26 run 5 hours and 5 minutes late Bristol to Roanoke."

Later he placed train order 102, reading as follows:

"Order No. 98 is annulled. No. 26 run 5 hours and 15 minutes late Bristol to Roanoke."

On account of No. 26 not making the usual time, he advised Dispatcher Overstreet that he could use 5 hours and 40 minutes on that train from Walton to Roanoke. As this time would be of no value to trains on his district, he did not change order 102, which was still in effect on his territory. Dispatcher Overstreet then issued train order No. 73. He stated that the issuing of order 73, annulling order 102 to the operator at East Radford, might have been the cause of an oversight, which would result in the failure of delivery of order 102 to trains leaving East Radford.

Dispatcher Overstreet, in charge of the territory from Roanoke to Bluefield, and from Walton to East Radford, stated that Dispatcher Seay advised him that he could use 5 hours and 40 minutes on train No. 26, and on this information he issued order No. 73, reading as follows:

"Orders 98 and 102 are annulled. No. 30 run 10 minutes late East Radford to Roanoke. No. 26 run 5 hours and 40 minutes late Walton to Roanoke. 1st 42 run 40 minutes late Walton to Roanoke. 2nd 42 run 5 hours and 35 minutes late Walton to Roanoke."

It was not his intention to annul train order No. 102 on the territory between East Radford and Bristol but intended to annul that order only in the territory of which he was in charge. His purpose in annulling orders 98 and 102 was on account of some pusher engines having order 98 and not having order 102, and he thought it would be less confusing to all concerned to annul these two orders and only have one run late order on No. 26 in existence. He admitted that the annulling of order 102 would leave room for confusion at East Radford.

Operator Durham, at Dublin, Va., stated that shortly before the arrival of No. 26 he inquired of the operator at East Radford where extra 1461 was going for No. 26, and was told it would stay at end of double track, and with this information he gave train No. 26 a clear block. He stated that the operator

at East Radford did not use signal '37' for extra 1461, which is the manner provided by book of rules for blocking a west-bound train. Had he done so he would have told him that train No. 26 was coming close, and he would have held train No. 26 until extra 1461 reported clear at some point.

This accident was caused by the failure of Conductor Hines of extra 1461 properly to check the train register at East Radford before leaving there, and ascertain that train No. 26 had not arrived. No reason was or can be given why he overlooked this train.

Time table rule No. 2 provides that "Conductors only will examine registers," thus relieving enginemen of that responsibility.

A contributing cause of this accident was Operator Dixon at East Radford issuing a clearance card to extra 1461 and permitting that train to enter the block west of there without notifying the operator at Dublin, the next block station west, as required by rule 721.

Rule 721 of the operating rules of the Norfolk & Western Railway reads as follows:

"To prevent opposing trains entering a block simultaneously operators will not permit west or southbound trains to enter until they have notified the operator at the next block station west or south to block east or northbound trains, using signal '37', as per rule 719."

Some criticism also attaches to Dispatcher Overstreet, who issued train order No. 73 to the operator at East Radford, in annulling train order No. 102, which was a run late order on train No. 26. Had this order not been annulled it would have been delivered to the crew of extra 1461 at East Radford and undoubtedly would have reminded them that train No. 26 had not arrived there and the accident would have been prevented.

All of the employees involved in this accident were experienced men with good records. At the time of the accident the crew of extra 1461 had been on duty about eight hours, and the crew of train No. 26 had been on duty about four hours. Operator Dixon had been on duty about six hours.